Appendix B

Management Goals, the COA/GLI Listing, and the Chemical Decision Approach

B.1. The COA/GLI Listing and Management Goals

The first step in assigning pollutant management goals was to identify the universe of persistent bioaccumulative toxic chemicals that might pose a risk to Lake Superior. A list of chemicals was derived by combining the *U.S. Great Lakes Water Quality Guidance* (GLI) Bioaccumulative Chemicals of Concern (BCC) and the list of Tier I and II substances that form the baseline commitment under the Canada-Ontario Agreement (COA). (See Table B-1.)

B.2. The Chemical Decision Approach

The combined list serves as the starting point for a chemical listing decision approach (Figure B-1) that can help to identify pollutants which could impact Lake Superior. This chemical listing decision approach was devised in conjunction with the Lake Superior Binational Forum. The decision approach considered the chemical properties of the pollutants of concern, as well as the limited assimilative capacity of the lake, and grouped the pollutants by management approach (see Chapter 2).

Table B-1. Lake Superior Combined Listing (Combination of the COA Tier I[a] and Tier II[b] Chemicals and GLI BCCs[c]).

aldrin[a]/dieldrin[a,c]	beta-BHC[c]
anthracene[b]	delta-BHC[c]
PAHs[b]: benz[a]anthrancene[b], benzo[b]fluoranthene[b], benzo[ghi]perylene[b], benzo[a]pyrene[b], dinitropyrene[b], phenanthrene[b]	gamma-BHC (Lindane)[c]
	alkyl lead[a]
	mercury[a,c]
	mirex[a,c]
cadmium[b]	octachlorostyrene[a,c]
2-chloroaniline (4,4-methylenebis)[b]	PCBs[a,c]
chlordane[a,c]	PCDDs (dioxins)[c,d]
DDT[a,c]	PCDFs (furans)[a]
DDT metabolites[c]	2,3,7,8-TCDD[c,d]
1,4-dichlorobenzene[b]	pentachlorobenzene[c]
3,3'-dichlorobenzidine[b]	pentachlorophenol[b]
hexachlorobutadiene (hexachloro-1,3-butadiene)[c]	photomirex[c]
	1,2,3,4-tetrachlorobenzene[c]
hexachlorobenzene[a,c]	1,2,4,5-tetrachlorobenzene[c]
hexachlorocyclohexanes (BHCs)[b,c]	toxaphene[a,c]
alpha-BHC[c]	tributyl tin[c]

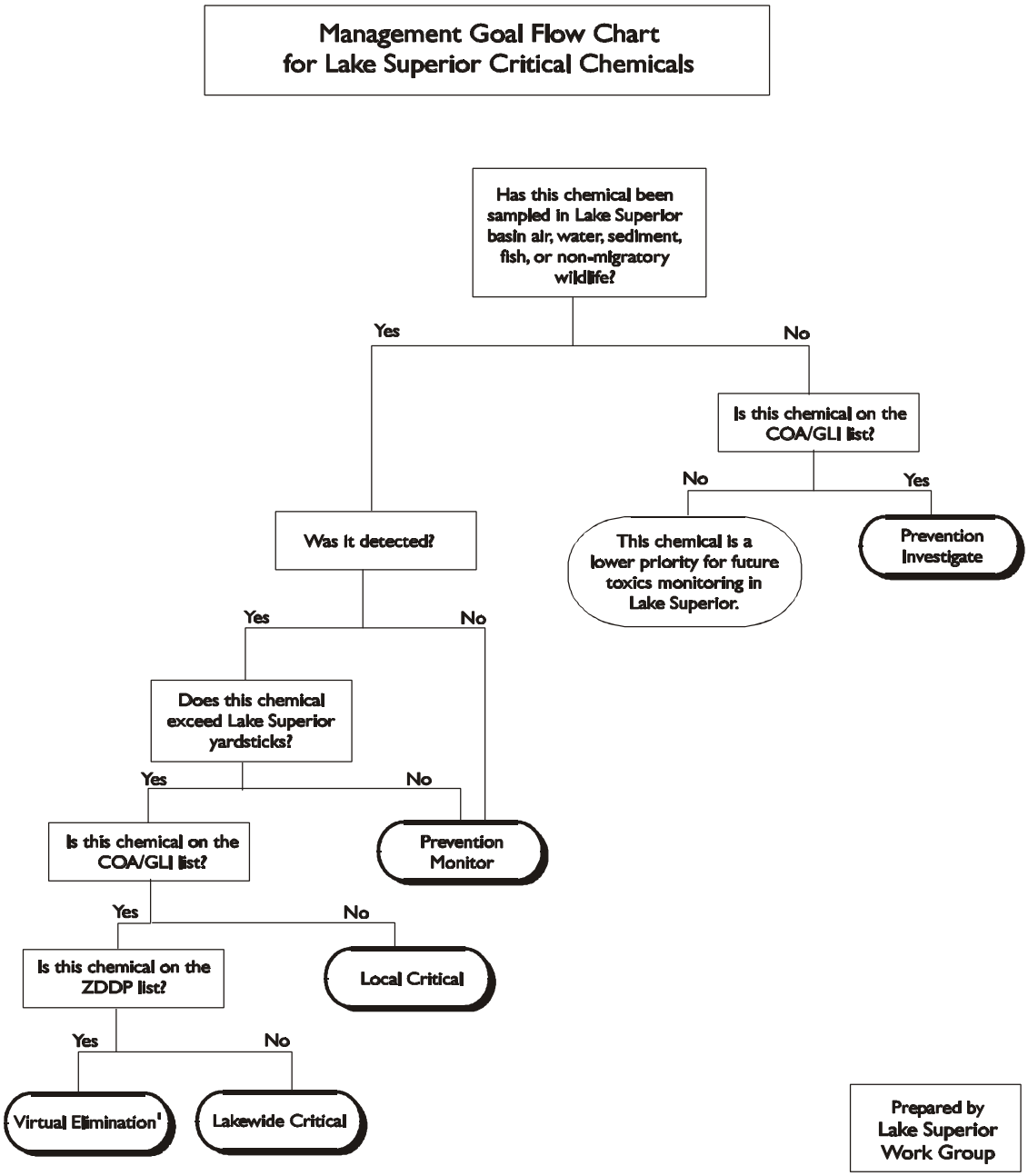
[a] Canada-Ontario Agreement (COA) Respecting the Great Lakes Basin Ecosystem, 1994 Tier I substances are targeted for virtual elimination. Local or direct sources of these substances in the Ontario portion of the Great Lakes basin will be asked to virtually eliminate these substances.

[b] COA Tier II substances have caused or have potential to cause widespread impacts. Local or direct sources of these substances in the Ontario portion of the Lake Superior basin will be asked to reduce these substances.

[c] Great Lakes Water Quality Guidance (GLI) final list of Bioaccumulative Chemicals of Concern (BCC). Discharges of these chemicals in the U.S. portion of the Great Lakes will be limited by GLI criteria adopted by the states. Heptachlor was on the draft GLI list of BCCs, but was dropped because of the experimental methods used to determine the bioaccumulative factor (BAF). Although officially not a BCC, this chemical remains a high priority chemical for Lake Superior because potential exists for a high BAF and because it exceeds the lakewide yardstick for water quality.

[d] The GLI lists 2,3,7,8-TCDD, rather than dioxins (i.e., PCDDs), as a BCC.

Figure B-1.



[1] Future implementation of the draft Binational Virtual Elimination Strategy might result in some chemicals in the remediation and prevention management goal categories being targeted for virtual elimination.